

IN THE CLAIMS:

The status of the claims is noted below.

1. (Currently Amended) A light collection apparatus for collecting light from a light source, comprising:

[[i.]] a spherical lens, ~~said lens~~ [[ii.]] including a surface [[iii.]] having a spherical curvature; and

[[iv.]] an optical transmission medium [[v.]] placed at a center [[vi.]] of said spherical curvature [[.]] of said spherical lens;

whereby [[vii.]] said lens directs [[viii.]] at least a portion of the light [[ix.]] into said optical transmission medium.

2. (Currently Amended) The light collection apparatus of claim 1, wherein [[i.]] said optical transmission medium [[ii.]] includes a connector [[iii.]] detachably engaged to [[iv.]] an attachment assembly [[v.]] on said lens [[vi.]] for placing said optical transmission medium [[vii.]] at said center of said spherical curvature of said spherical lens.

3. (Currently Amended) The light collection apparatus of claim 2, wherein [[i.]] said attachment assembly and [[ii.]] said lens [[iii.]] are integrated [[iv.]] as a single unit.

4. (Currently Amended) The light collection apparatus of claim 2, wherein [[i.]] said connector [[ii.]] includes a pivoting element [[iii.]] for adjusting [[iv.]] said optical transmission medium [[v.]] to said lens.

5. (Currently Amended) The light collection apparatus of claim 1, wherein [[i.]] said optical transmission medium [[ii.]] includes an optical fiber.

6. (Cancelled)

7. (Currently Amended) The light collection apparatus of claim 1, wherein [[i.]] said lens [[ii.]] includes a material [[iii.]] having a predetermined index of refraction.

8. (Currently Amended) The light collection apparatus of claim 7, wherein [[i.]] the predetermined index of refraction is approximately 1.49.

9. (Currently Amended) The light collection apparatus of claim 8, wherein [[i.]] the material is acrylic.

10. (Currently Amended) The light collection apparatus of claim 7, wherein [[i.]] the predetermined index of refraction is approximately 1.39.

11. (Currently Amended) The light collection apparatus of claim 10, wherein [[i.]] the material is pyrex glass.

12. (Currently Amended) The light collection apparatus of claim 1, wherein [[i.]] said spherical lens [[ii.]] includes an outer layer and [[iii.]] an inner layer.

13. (Currently Amended) The light collection apparatus of claim 12, wherein [[i.]] an interface [[ii.]] between said outer layer and said inner layer [[iii.]] includes a second spherical curvature.

14. (Currently Amended) The light collection apparatus of claim 13, wherein [[i.]] a center of the second spherical curvature [[ii.]] overlaps [[iii.]] the center [[iv.]] of the spherical curvature [[v.]] of the surface.

15. (Currently Amended) The light collection apparatus of claim 14, wherein [[i.]] the second spherical curvature [[ii.]] is coaxial ~~parallel~~ to [[iii.]] the spherical curvature.

16. (Currently Amended) The light collection apparatus of claim 12, wherein [[i.]] the outer layer includes an outer layer material and [[ii.]] the inner layer includes an inner layer material, and [[iii.]] an index of refraction of the outer layer material is [[iv.]] less than [[v.]] an index of refraction of the inner layer material.

17. (Currently Amended) The light collection apparatus of claim 1, further comprising [[i.]] a controller [[ii.]] connected to [[iii.]] said optical transmissions medium, [[iv.]] said controller being adapted to control [[v.]] at least one of [[vi.]] an output amount and [[vii.]] an output characteristic [[viii.]] of the directed light [[ix.]] to be outputted to [[x.]] one or more outputs.

18. (Currently Amended) The light collection apparatus of claim 17, wherein [[i.]] the output characteristic [[ii.]] includes a wavelength [[iii.]] of the directed light.

19. (Currently Amended) The light collection apparatus of claim 17, wherein [[i.]] the one or more outputs [[ii.]] includes an energy converter.

20. (Currently Amended) The light collection apparatus of claim 17, wherein [[i.]] the one or more outputs [[ii.]] includes a lighting apparatus.

21. (Currently Amended) The light collection apparatus of claim 1, further comprising [[i.]] an energy converter [[ii.]] connected to [[iii.]] said optical transmissions medium, [[iv.]] said energy converter [[v.]] being adapted to convert [[vi.]] the directed light [[vii.]] into a different form of energy.

22. (Currently Amended) The light collection apparatus of claim 21, wherein [[i.]] said energy converter [[ii.]] includes a thermal photovoltaic cell.

23. (Currently Amended) The light collection apparatus of claim 21, wherein [[i.]] said energy converter [[ii.]] includes a light-absorbing medium.

24. (Currently Amended) The light collection apparatus of claim 23, wherein [[i.]] said light-absorbing medium [[ii.]] includes carbon particles.

25. (Currently Amended) The light collection apparatus of claim 21, wherein [[i.]] said energy converter [[ii.]] includes an electricity generator.

26. (Currently Amended) The light collection apparatus of claim 21, further comprising [[i.]] an energy storage element [[ii.]] connected to [[iii.]] said energy converter, [[iv.]] said energy storage element [[v.]] being adapted to store [[vi.]] energy [[vii.]] outputted by said energy converter.

27. (Currently Amended) The light collection apparatus of claim 1, wherein [[i.]] an operational arc [[ii.]] of said surface is [[iii.]] such that a focal point thereof [[iv.]] is fixed and [[v.]] independent of [[vi.]] a location of [[vii.]] the light source.

28. (Currently Amended) The light collection apparatus of claim 27, wherein [[i.]] said optical transmission medium [[ii.]] overlaps [[iii.]] said focal point.

29. (Currently Amended) The light collection apparatus of claim 1, further comprising [[i.]] a light collector, whereby [[ii.]] said light collector directs [[iii.]] a remaining portion of the light [[iv.]] towards the optical transmission medium.

30. (Currently Amended) The light collection apparatus of claim 29, wherein [[i.]] said light collector includes [[ii.]] a convex surface.

31. (Currently Amended) The light collection apparatus of claim 29, wherein [[i.]] said light collector includes [[ii.]] a fresnel surface.

32. (Currently Amended) The light collection apparatus of claim 29, wherein [[i.]] said light collector and [[ii.]] said lens [[iii.]] are integrated [[iv.]] as a single unit.

33. (Currently Amended) The light collection apparatus of claim 29, wherein [[i.]] said light collector includes [[ii.]] a conical shape.

34. (Currently Amended) The light collection apparatus of claim 33, wherein [[i.]] said light collector includes [[ii.]] a surface that forms [[iii.]] a frustrum [[iv.]] of a cone.

35. (Currently Amended) The light collection apparatus of claim 33, wherein [[i.]] said light collector includes [[ii.]] a reflective surface.

36. (Currently Amended) A lighting apparatus, comprising:
[[i.]] one or more light collectors comprising at least one spherical lens [[ii.]] located at a collector location; and
[[iii.]] one or more light fixtures [[iv.]] located at one or more locations [[v.]] separate from said collector location, [[vi.]] said one or more light fixtures being [[vii.]] connected to [[viii.]] said one or more light collectors [[ix.]] through an optical transmission medium, whereby [[x.]] light [[xi.]] collected by [[xii.]] said one or more light collectors [[xiii.]] is emitted by [[xiv.]] said one or more light fixtures.

37. (Currently Amended) The lighting apparatus of claim 36, wherein [[i.]] said optical transmission medium [[ii.]] includes an optical fiber.

38. (Currently Amended) The lighting apparatus of claim 36, wherein [[i.]] at least one of [[ii.]] said light collectors [[iii.]] is adapted to collect [[iv.]] natural light.

39. (Currently Amended) The lighting apparatus of claim 36, further comprising [[i.]] a controller [[ii.]] connected to [[iii.]] said optical transmissions medium, [[iv.]] said controller being adapted to control [[v.]] at least one of [[vi.]] an output amount and [[vii.]] an output characteristic [[viii.]] of the light [[ix.]] collected by [[x.]] said one or more light collectors [[xi.]] to be outputted to [[xii.]] said one or more light fixtures.

40. (Currently Amended) The lighting apparatus of claim 39, wherein [[i.]] the output characteristic [[ii.]] includes a wavelength [[iii.]] of the light.

41. (Currently Amended) A light collection method of collecting light from a light source, comprising the steps of:

[[i.]] directing at least a portion of the light [[ii.]] into an optical transmission medium [[iii.]] using a spherical lens, said lens [[iv.]] including a surface [[v.]] having a spherical curvature; and

[[vi.]] transmitting the directed light through said optical transmission medium, [[vii.]] said optical transmission medium being [[viii.]] placed at a center [[ix.]] of said spherical curvature of said spherical lens.

42. (Currently Amended) The light collection method of claim 41, further comprising the step of [[i.]] controlling [[ii.]] at least one of [[iii.]] an output amount and [[iv.]] an output characteristic [[v.]] of the directed light [[vi.]] to be outputted.

43. (Currently Amended) The light collection method of claim 42, wherein [[i.]] the output characteristic [[ii.]] includes a wavelength [[iii.]] of the light.

44. (Currently Amended) The light collection method of claim 41, further comprising the step of [[i.]] converting [[ii.]] the directed light [[iii.]] into a different form of energy.

45. (Currently Amended) The light collection method of claim 44, wherein [[i.]] the converting step converts the directed light [[ii.]] to heat energy.

46. (Currently Amended) The light collection method of claim 45, further comprising the step of [[i.]] storing the heat energy.

47. (Currently Amended) The light collection method of claim 44, wherein [[i.]] the converting step converts the directed light [[ii.]] to electricity.

48. (Currently Amended) The light collection method of claim 47, further comprising the step of [[i.]] storing the electricity.

49. (Currently Amended) The light collection method of claim 41, wherein [[i.]] an operational arc [[ii.]] of said surface is [[iii.]] such that a focal point thereof [[iv.]] is fixed and [[v.]] independent of [[vi.]] a location of [[vii.]] the light source.

50. (Currently Amended) The light collection method of claim 49, wherein [[i.]] said optical transmission medium [[ii.]] overlaps [[iii.]] said focal point.

51. (Currently Amended) The light collection method of claim 41, further comprising the step of [[i.]] directing a remaining portion of the light [[ii.]] towards the optical transmission medium [[iii.]] using a light collector.

52. (Currently Amended) The light collection method of claim 51, wherein [[i.]] said light collector includes [[ii.]] a convex surface.

53. (Currently Amended) The light collection method of claim 51, wherein [[i.]] said light collector includes [[ii.]] a fresnel surface.

54. (Currently Amended) The light collection method of claim 51, wherein [[i.]] said light collector and [[ii.]] said lens [[iii.]] are integrated [[iv.]] as a single unit.

55. (Currently Amended) The light collection apparatus of claim 51, wherein [[i.]] said light collector includes [[ii.]] a conical shape.

56. (Currently Amended) The light collection apparatus of claim 55, wherein [[i.]] said light collector includes [[ii.]] a surface that forms [[iii.]] a frustrum [[iv.]] of a cone.

57. (Currently Amended) The light collection apparatus of claim 55, wherein [[i.]] said light collector includes [[ii.]] a reflective surface.

58. (Currently Amended) A lighting method, comprising the steps of:

[[i.]] collecting light at a light collection location including at least one spherical lens; and

[[ii.]] emitting the collected light [[iii.]] at one or more locations [[iv.]] separate from said light collection location [[v.]] using one or more light fixtures.

59. (Currently Amended) The lighting method of claim 58, wherein [[i.]] the collected light is natural light.

60. (Currently Amended) The lighting method of claim 58, further comprising the step of [[i.]] controlling [[ii.]] at least one of [[iii.]] an output amount and [[iv.]] an output characteristic [[v.]] of the collected light [[vi.]] to be emitted [[vii.]] by said one or more light fixtures.

61. (Currently Amended) The light collection method of claim 60, wherein [[i.]] the output characteristic [[ii.]] includes a wavelength of the collected light.